



**BURLINGTON
ENVIRONMENTAL**

July 28, 1993

Mr. Douglas Brown
Washington Department of Ecology
Hazardous Waste Permits Section
P.O. Box 47600
Olympia, WA 98504-7600

WA0 2917
FFA 3c

7/28/1993

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RCRA PERMITS SECTION

FILE COPY

Re: Pier 91 Facility Part B permit appeal, comments on draft permit addendum

Dear Mr. Brown:

Thank you for the opportunity to review the draft addendum to the Pier 91 Permit. With the exception of the issues outlined below, the new permit language provided in the addendum resolves all of the appealed conditions.

1. Ecology's proposed language for permit condition II.A.12 (PCB Analysis) describes actions to be taken in the event "detectable" levels of PCBs are found in outgoing material. Burlington proposes that this language be clarified as follows: "...should detectable levels of PCBs be identified *above regulated levels* in any such outgoing shipment...".
2. Permit condition II.C.1. should be changed to include the new corporate office address of Waterfront Place One, Suite 700, 1011 Western Avenue, Seattle, WA, 98104.
3. Permit condition IV.A.4.c.iii. requires an independent, registered professional engineer to review and certify semi-annual tightness tests on tanks 2705-2708. Burlington requests that the requirement for the independent P.E. certification be limited to review of the results of testing conducted in conjunction with overall tank certification procedures described in Section F of the permit application. Semi-annual tightness testing would be conducted as required, and test results would be maintained in the operating record, but the financial and scheduling burden of semi-annual independent P.E. certifications would be greatly reduced.

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Page 2

The additional information requested by Ecology regarding the design and operation of tanks 2705-2708 is enclosed. Revised pages of the inspection and contingency plans have been provided for your review and inclusion in the permit addendum. For purposes of incorporating the required closure plan changes, Burlington requests to have a schedule included in the addendum that allows submittal of this information in conjunction with the annual closure cost estimate adjustment for inflation. Combining these two submittals would help reduce the number of revisions made to the plan. Burlington anticipates submitting adjusted closure cost estimates by early fall of this year.

All of us at Burlington appreciate your efforts in resolving these issues. If you have any questions, or if you need more information, please call me at 654-8087.

Sincerely,



Keith Lund

Senior Environmental Compliance Specialist

Enclosures

cc: Stephanie Delaney, AAG/Ecology
Julie Sellick, Ecology NWRO
Doug Hotchkiss, Port of Seattle

Galen Tritt, Ecology NWRO
Carrie Sikorski, EPA Region 10

Revisions to Pier 91 Permit Attachments

Underlining indicates new language.

Section G, Contingency Plan

Page G28

- Procedures for tank repair:
 - a. Transfer remaining material from tank to another compatible tank.
 - b. Air ventilate for 24 hours.
 - c. Use volatile organic vapor detector to verify no volatile vapors are present. Use confined space entry procedures for internal repairs (see Section F2.2.3, Tank Assessment Schedule, for procedure and required personal protective equipment).
 - d. For internal repairs, clean tank with wire brush, pressure washer or steam cleaner (for organics). Capture rinsate water for treatment.
 - e. For Tanks 2705-2708, if a leak from the primary tank bottom is responsible for the release, the tank will be emptied within 24 hours. After the tank has been cleaned, air ventilated and tested for volatile organic vapors, the interspace will be flushed to remove released materials. The flushing procedure will be conducted as follows: Attach a ninety degree elbow (oriented vertically) to the leak detection port. Blind flange the bottom of the leak detection port. Fill interspace with water through the elbow until water overflows the elbow. Disconnect elbow, allow water to drain. Repeat above procedure two more times. The rinsate will be collected in the sump and pumped to an appropriate storage or treatment tank.
 - f. Specific repairs to a tank must be approved by Burlington Environmental's Engineering Department and Regulatory Affairs Department for compliance with 40 CFR 264.196(f) and WAC 173-303-640(7)(f).

Section F2.0, Inspection Schedule

Page F5

The sumps and secondary containment structures provided for all tank and container storage and treatment systems as well as the leak detection systems for Tanks 2705-2708 are visually inspected daily during operational hours, and at a minimum every 24 hours during non-operational hours, for leakage or accumulated liquids. In this way leaked material and precipitation can be detected within 24 hours and removed in a timely manner.

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Page 1

The inspection observation and frequency of the general facility equipment is described in Section F2.1. Sumps, leak detection systems for Tanks 2705-2708, and secondary containment structures inspections are included with the specific process equipment inspections in Section F2.2.

Pages 13-14 (add after last paragraph on page 13)

The leak detection ports on Tanks 2705-2708 will be equipped with a dedicated receptacle device that will collect any released material before it can reach the sump. These receptacles will be inspected daily for the possible accumulation of released tank contents. Receptacles will be constructed as to exclude rainfall accumulation.

Table F2-5 (add after tank overfilling control equipment)

<u>Leak Detection System</u>	<u>- Visually inspect the leak detection port receptacles for accumulation of released tank contentsl (daily)</u> <u>- Perform periodic tightness testing (semi-annually)</u>
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Page F20 (new paragraph before Coupon Inspection Method):

Tanks 2705-2708 will have tightness tests performed on the interspaces between the tank bottoms (once they are refitted with a secondary tank bottom) to ensure that failure of a tank bottom has not occurred. Tightness tests will be performed prior to placing these modified tanks into service and no less than every six months thereafter. Interspace tightness testing shall be performed prior to returning to service any leaking tank which has been repaired. Figure F2-1 contains a diagram of the air pressure test apparatus which will be used to perform these tightness tests.

Page F21 (after Ultrasonic Testing Method)

Tightness Testing Procedure

This procedure tests the interstitial space in Tanks 2705-2708 by applying air pressure using the apparatus specified in Figure F2-1. All seams, joints, and fittings on the test apparatus will be inspected using a soap film, linseed oil, or another material suitable for the detection of leaks.

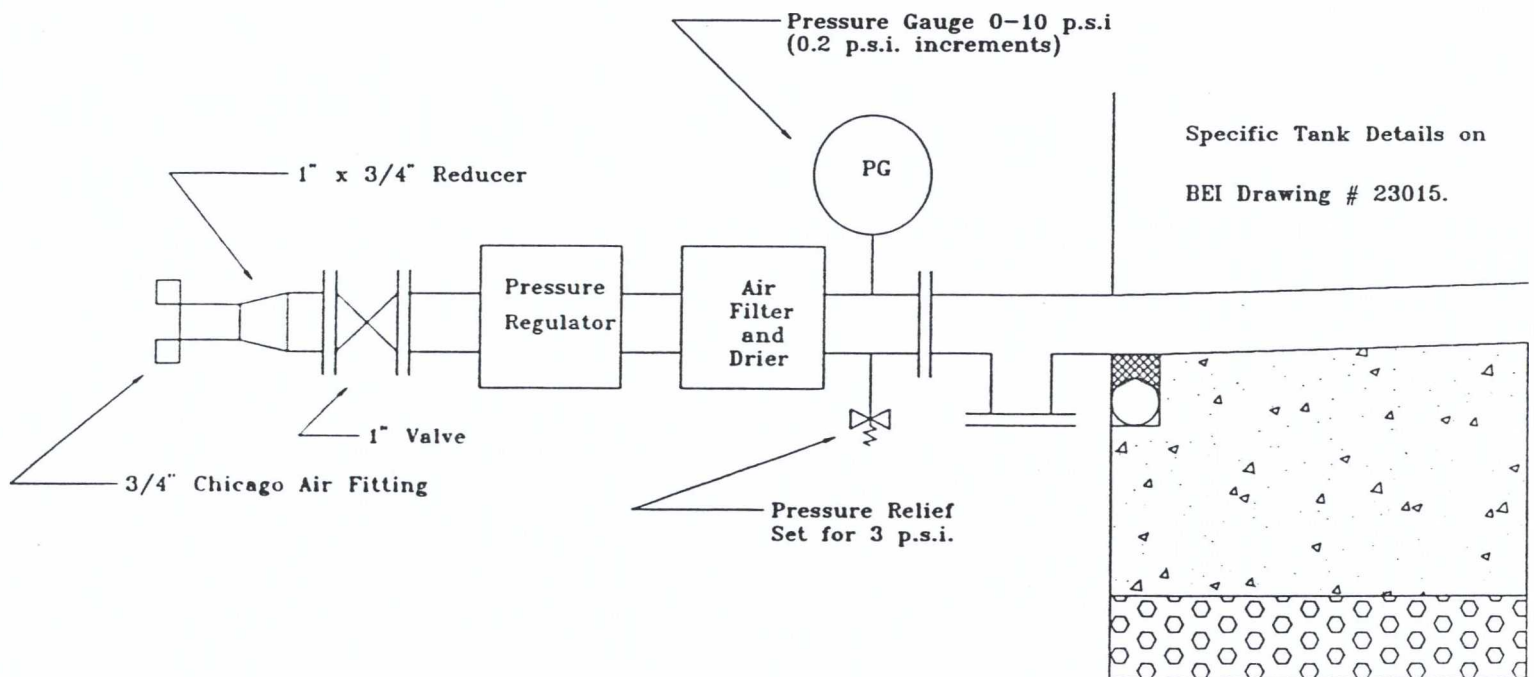
The testing unit is installed at the leak detection port of the tank (at both interspace points). A minimum liquid level of eight feet in the tank is verified. All tank valves and piping are locked to prevent any pressure changes due to a change in tank liquid level or temperature. An air hose is hooked up to the Chicago air fitting. Once the air is turned on, air is allowed to enter the interstitial space until a pressure of two p.s.i. has been reached on the gauge. Upon reaching this pressure, the testing unit is closed. The air temperature in the interstitial space is then allowed to stabilize for two hours and then the tank is monitored for another two hours to assure that the air pressure remains constant.

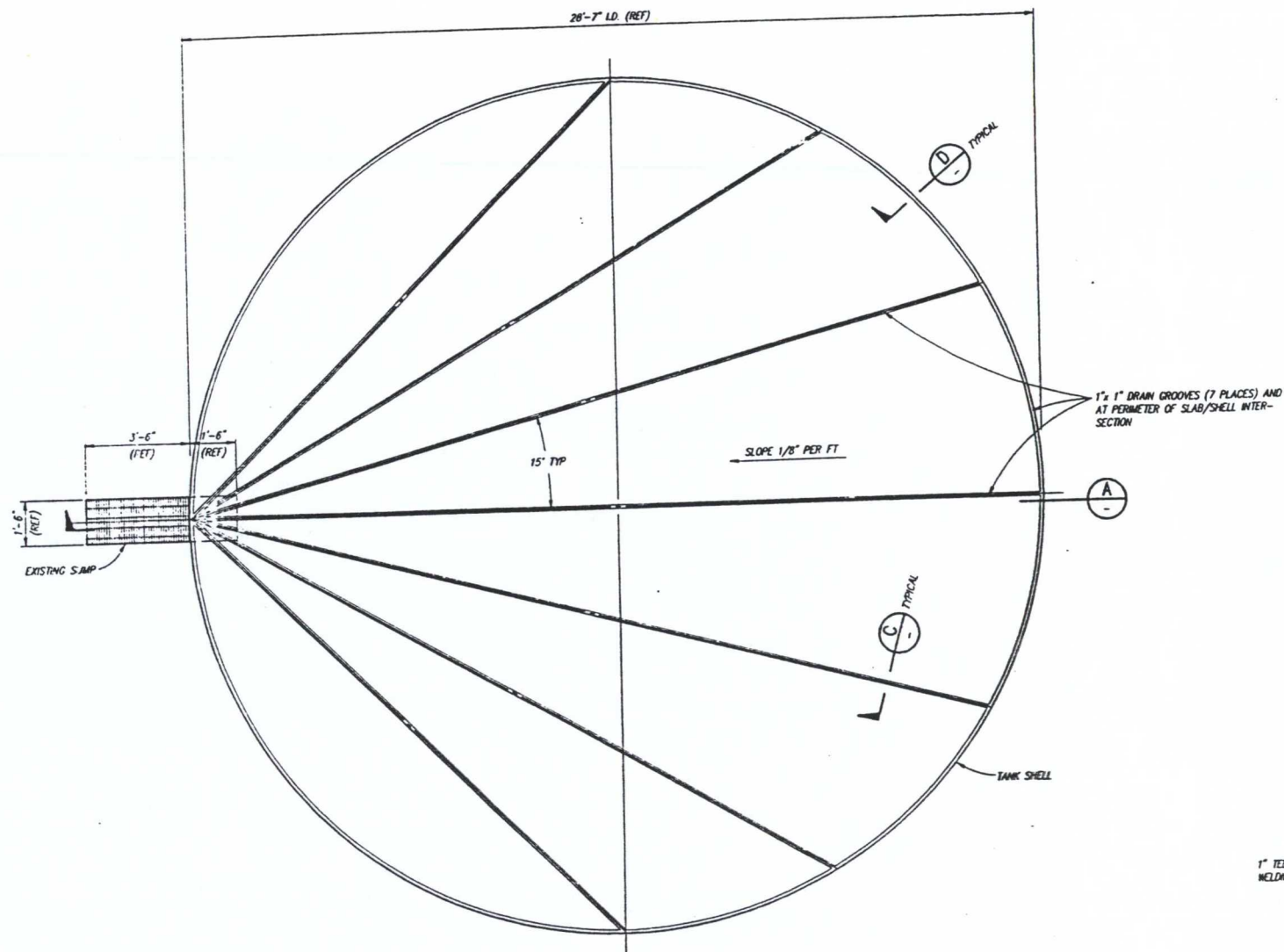
The results of all tightness tests will be reviewed and certified by an independent, registered professional engineer, and will be maintained in the operating record until facility closure. Any tank for which an interspace area between the tank bottoms cannot be certified as tight will be immediately taken out of service.

Note: Daily Inspection Forms will be revised to reflect the leak detection system inspection requirements.

Figure 2-1

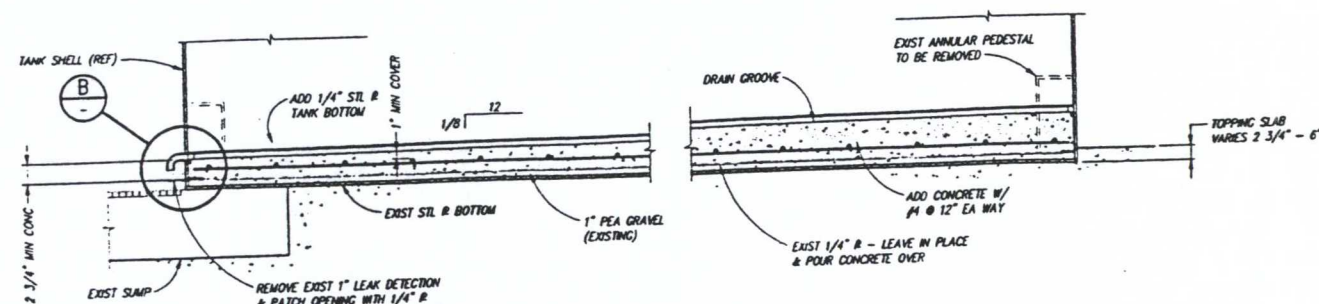
Air Pressure Test Apparatus & Testing Procedure



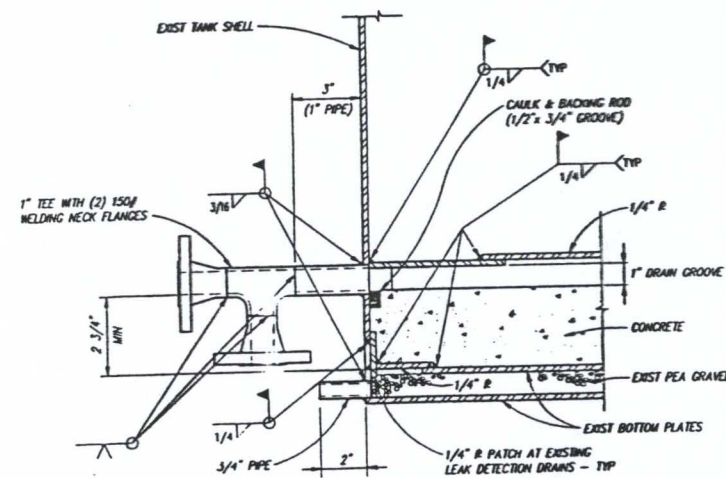


DRAIN GROOVE PLAN - TANKS T2705 THRU T2708
SCALE: 3/8" = 1'-0"

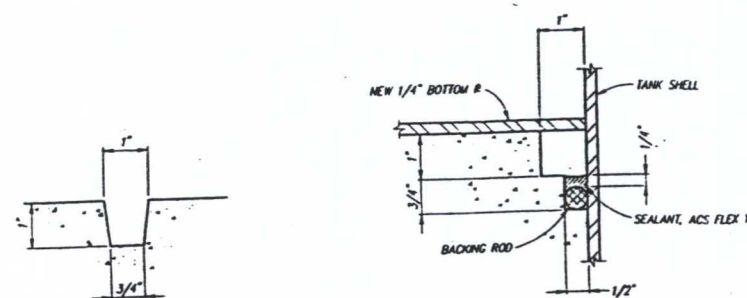
NOTE:
SEAL ANY PENETRATION INTO TANK FOR CONSTRUCTION PURPOSES
WITH 1/4" R. AND FULL PENETRATION BUTT WELDED INTO PLACE.



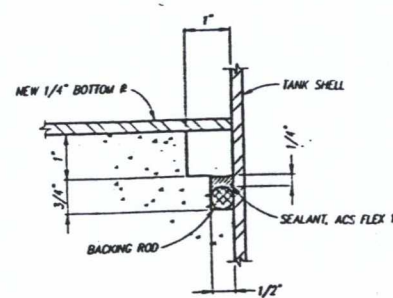
SECTION A-A
SCALE: NONE



DETAIL B
SCALE: NONE



SECTION C-C
HALF SIZE



PERIMETER DRAIN GROOVE

SECTION D-D
HALF SIZE

STRUCTURAL NOTES (CONT.):

STRUCTURAL STEEL

- Steel plate and shapes shall conform to ASTM A36.
- All work shall be in accordance with AWS "Specification for Structural Steel Buildings", June 1989 and AWS "Code of Standard Practice for Steel Buildings and Bridges", September 1986.
- Welding shall be done by AWS certified welders.
- Welding shall conform to AWS D1.1 Structural Welding Code.
- Welds shall be 3/16" minimum fillet welds.
- Electrodes shall be E70-XX.

CONCRETE

- Any discrepancy found among the drawings, these notes and the site conditions shall be reported to the Construction Engineer, who shall correct such discrepancy in writing. Any work done by the Contractor after discovery of such discrepancy and prior to the Construction Engineer's written correction shall be done at the Contractor's risk. The contractor is responsible for all bracing and shoring during construction. All materials shall be as stated in these notes or as approved by the Owner.
- The Contractor shall verify all dimensions at the construction site.
- All construction shall conform to the applicable requirements of the 1991 UBC.
- References:
ACI 301-89 Specifications for Structural Concrete for Buildings
ACI 302-89 Guide for Concrete Floor and Slab Construction
ACI 308-89 Concrete Sanitary Engineering Structures

CONCRETE MIXES

- Site or ready mix concrete shall be provided per ACI 318, Chapter 4 and ACI 301, Chapter 7.
- All concrete shall have a 28-day compressive strength of 4500 PSI, minimum 6 1/2 sack and 100 pounds fly-ash.
- Concrete shall have the maximum aggregate size of 1/2 inch.
- Concrete shall have the lowest practical sand content.
- Fresh concrete shall have the lowest practical slump not exceeding 7 inches. The maximum permissible water-cement ratio shall not exceed 0.33. Design mix shall minimize shrinkage by use of an approved water reducing admixture.
- Concrete shall contain 1.5 percent air.
- Admixtures shall conform to ASTM C494:
Superplasticizer - 131 oz/yd
Water reducer - 25 oz/yd
- The contractor shall furnish mix proportions to the Owner for approval before mixing any concrete. The mix proportions shall be prepared by a testing laboratory approved by the Owner. Mix designs shall be prepared in accordance with ACI 301 and ACI 211.
- Concrete shall have 50 pounds/yd microsilica addition.

CONCRETE HANDLING AND PLACING

- Concrete shall be mixed and placed per ACI 318, Chapter 5 and ACI 301, Chapter 8.
- Vibrators shall be the largest that can be operated in the placement.

FINISHING

- All concrete shall be finished per ACI 302 to avoid all forms of surface cracking.
- All concrete shall be trowel finished.

CURING

- Curing shall begin immediately after completion of placement and finishing for concrete surfaces not in contact with forms.
- Concrete slabs shall be treated with Ashford Formula by Concrete Chemical Co. for curing of concrete. Curing and sealing agent shall be applied per manufacturer's recommendations.

DETAILS

- Concrete cover over reinforcing bars, unless noted otherwise, shall be 1 inch.
- Bars shall be securely tied in place with #16 double annealed iron wire. Bars shall not be welded or tack welded. Bars shall be supported upon acceptable chairs.
- Splices in reinforcing shall be 21 inches for #4 bars.
- Concrete shall be poured monolithically. Cracks in new concrete with width greater than four-thousandths inch shall be repaired by epoxy injection.

TESTING

- Concrete: Three compressive strength specimens shall be made for each 75 cubic yards, or each day concrete is poured, whichever is greater. Sampling procedures shall conform to ASTM C172. Test cylinders shall be made and cured in compliance with ASTM C31. Cylinder testing procedures shall conform to ASTM C39.
- Tests shall be made at 7 days and 28 days.
- Testing and inspection reports shall be submitted to the Contractor, Owner and Engineer.

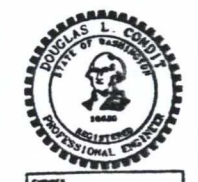
SEALANTS

- ACS Flex 1 by Koch Industries.
- Apply sealants per manufacturer's recommendations.
- Backing rod - closed cell polyethylene foam.

CATHODIC PROTECTION

- Cathodic protection shall be installed to protect tank bottom and walls as shown in drawing no. 43010.

EISI
CONSULTING ENGINEERS
1900 West Emerson Pl #200
Seattle, Washington 98119



BURLINGTON ENVIRONMENTAL INC.

TANKS T2705 THRU 2708
SECONDARY TANK BOTTOM
PIER 91 FACILITY

REV	DATE	APPROVAL	DESCRIPTION
1	5/21/93		

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